# EXHIBIT D

# IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF MASSACHUSETTS

SINGULAR COMPUTING LLC,	§ §	
	§	Civil Action No. 1:19-cv-12551-FDS
Plaintiff,	§	
	§	
v.	§	JURY TRIAL DEMANDED
	§	
GOOGLE LLC,,	§	
	§	
Defendant.	§	
	§	

# PLAINTIFF'S OBJECTIONS AND RESPONSES TO DEFENDANT'S FIRST SET OF INTERROGATORIES [NOS. 1-12]

Pursuant to Fed. R. Civ. P. 26 and 33, Plaintiff, Singular Computing LLC ("Plaintiff" or "Singular"), serves these objections and responses to Defendant, Google LLC's ("Google"), First Set of Interrogatories (Nos. 1-12).

Singular's investigation and discovery efforts in this case are ongoing. Thus, these objections and responses are based only on information presently available and known to Singular. Singular reserves its right to supplement or amend these objections and responses as this case develops, and if and when Singular discovers additional responsive information.

Singular also reserves its right to object to the admissibility of any of its objections or responses, and to any document produced or referenced in response to these interrogatories, in whole or in part, at trial or in connection with any hearing, deposition, or other proceeding in this action, on any grounds, including but not limited to authenticity, materiality, relevance, and privilege. In addition, any statement that documents will be produced in response to a particular interrogatory means only that the documents will be produced if such documents exist, are in

work product doctrine. Singular also specifically objects to the timing of Interrogatory No. 2, which requests identification, prior to claim construction, of the first written description, offer for sale, public disclosure, public use, or other disclosure of each asserted claim. *See, e.g., X2Y Attenuators, LLC v. ITC*, 757 F.3d 1358, 1365 (Fed. Cir. 2014) (Reyna, J., concurring). ("Where the claims have not been properly construed, the full scope of the claim is unknown, thereby rendering baseless any determination of written support in an earlier patent. It follows that entitlement to priority cannot be decided without first construing the asserted claims..."); *see also University of Virginia Patent Foundation v. General Elec. Co.*, 2015 WL 4878880, \*4-\*5 (W.D. Va. 2015) (interrogatories concerning § 112 support in specification were premature and need not be answered until after claim construction ruling). Singular does not object to supplementing, and will agree to supplement, its response to Interrogatory No. 2 to provide the information Google has requested within a reasonable time after the Court has issued a claim construction ruling in this case.

#### **INTERROGATORY NO. 3**:

Identify any product (whether hardware or software) that has practiced any claim of the Patents-in-Suit, or that you allege to be an embodiment of any invention claimed in the Patents-in-Suit, including products designed, programmed, owned, marketed, sold or licensed by you.

#### RESPONSE:

In addition to its General Objections, Singular specifically objects to Interrogatory No. 3 as overly broad, unduly burdensome, not proportional to the needs of this case, and seeking wholly irrelevant information, as the Interrogatory is unbounded in scope, and would require needless analysis and expert opinion concerning infringement by any and all third parties and third-party products. Singular will thus respond to Interrogatory No. 3 with respect to Google, Singular, and

their respective product(s) only. Singular also specifically objects to the use of the term "product" in Interrogatory No. 3 as vague, ambiguous, and undefined by Google's First Set of Interrogatories.

Subject to and without waiving its objections, Singular responds that Google's Tensor Processing Unit Version 2 ("TPUv2") and Tensor Processing Unit Version 3 ("TPUv3) each embody each asserted claim in this action. Further, Singular hereby incorporates by reference into this response its Infringement Contentions, as amended from time to time. Singular also identifies its S1 Prototype.

#### **INTERROGATORY NO. 4**:

Describe in detail all the manners or techniques by which each claim of the Patents-in-Suit improved upon the prior art, added functionality that did not exist in the prior art, or provided a variation on or upgrade of the prior art, and explain why.

#### RESPONSE:

In addition to its General Objections, Singular specifically objects to Interrogatory No. 4 as seeking the subject of expert disclosures before the time, and other than in the manner, specified by order of this Court and the Federal Rules of Civil Procedure. Singular will serve its expert report concerning validity at the time specified by the Court's Scheduling Order, as amended from time to time, and in the manner required by any order of this Court or the Federal Rules of Civil Procedure.

Subject to and without waiving its objections, Singular responds that the novel and improved computer architectures developed by Dr. Bates provide for the inclusion within computer processors of processing elements designed to perform low precision and high dynamic range (LPHDR) arithmetic operations. Dr. Bates' patented architectures, allow for, *inter alia*, more efficient use of a computer's transistors and have revolutionized the way AI training and inference are accomplished.

#### **INTERROGATORY NO. 12**:

For each asserted claim, identify, on a limitation-by-limitation basis, where in the specification the written description and enabling disclosure for such limitation is provided as required by 35 U.S.C. § 112.

#### **RESPONSE**:

In addition to its General Objections, Singular specifically objects to the timing of Interrogatory No. 12, which seeks a response from Singular in advance of a claim construction order in this action. See, e.g., X2Y Attenuators, LLC v. ITC, 757 F.3d 1358, 1365 (Fed. Cir. 2014) (Reyna, J., concurring) ("Where the claims have not been properly construed, the full scope of the claim is unknown, thereby rendering baseless any determination of written support in an earlier patent. It follows that entitlement to priority cannot be decided without first construing the asserted claims..."); see also University of Virginia Patent Foundation v. General Elec. Co., 2015 WL 4878880, \*4-\*5 (W.D. Va. 2015) (interrogatories concerning § 112 support in specification were premature and need not be answered until after claim construction ruling). Singular does not object to supplementing, and will agree to supplement, its response to Interrogatory No. 12 to provide the requested information within a reasonable time after the Court has issued a claim construction ruling in this case.

Dated: August 26, 2020

Respectfully submitted,

/s/ Paul J. Hayes

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#### ATTORNEYS FOR THE PLAINTIFF

## **CERTIFICATE OF SERVICE**

I certify that on August 26, 2020, I served this document on Defendant by causing a copy to be sent via electronic mail to its counsel of record.

/s/ Paul J. Hayes